

What is claimed is:

1. An apparatus comprising:
 - a substantially hollow cylindrical central member having a proximal end and a distal end;
 - a leg member, attached to a distal end of said central member, wherein at least a portion of said leg member is adapted to permit production of an expanded distal radius in the apparatus;
 - a suture attached to a proximal portion of said central member;
 - an expander member, a distal portion of which is aligned co-axially through said central member;
 - a pusher member aligned co-axially around a proximal portion of said expander member, said pusher member adapted to prevent the movement in a proximal direction of said central member; and
 - a pre-biasing device adapted to selectively force at least a portion of said apparatus in a distal direction.
2. The apparatus of claim 1, further comprising:
 - an outer sleeve surrounding said apparatus, wherein said outer sleeve is adapted to be fitted to an endoscope.
3. The apparatus of claim 1, wherein said pre-biasing device comprises a member selected from the group consisting of a compressed gas compartment, a coil spring, and a torsion spring.
4. The apparatus of claim 1, further comprising:
 - a tether connected to a proximal portion of said expander member.
5. An apparatus comprising:
 - a substantially hollow central member adapted to permit the passage of a penetrating member adapted to penetrate tissue; and
 - a first leg member connected to a distal portion of said central member, wherein said first leg member is adapted to produce an increase in a distal radius of said apparatus,

and wherein said increase is adapted to restrain motion of said apparatus in a proximal direction.

6. The apparatus of claim 5, wherein said first leg member employs a technique for producing an increased radius selected from the group consisting of self-expanding and manually expandable.

7. The apparatus of claim 5, wherein said first leg member is adapted to expand in radius in response to the proximal motion of said penetrating member.

8. The apparatus of claim 5, wherein said first leg member comprises a shape memory alloy.

9. The apparatus of claim 5, wherein said first leg member comprises a first end connected to a distal portion, and a second end that extends approximately proximally prior to increasing said radius of said apparatus.

10. The apparatus of claim 5, wherein said first leg member comprises a first end connected to a distal portion, and a second end that extends approximately distally prior to increasing said radius of said apparatus.

11. The apparatus of claim 5, wherein said first leg member is adapted to expand in radius in response to the proximal motion of an encompassing sheath.

12. The apparatus of claim 5, further comprising:
a second leg member connected to a proximal portion of said central member,
wherein said second leg member is adapted to produce an increase in a proximal radius of said apparatus,
and wherein said increase is adapted to restrain motion of said apparatus in a distal direction.

13. The apparatus of claim 12, wherein said second leg member is adapted to expand in radius in response to a proximal motion of an encompassing sheath.

14. The apparatus of claim 12, wherein said second leg member is adapted to expand in radius by means of one or more rubber bands.

15. The apparatus of claim 5, wherein said central member is adapted to be a stent.
16. The apparatus of claim 5, wherein said central member is adapted to be expandable.
17. The apparatus of claim 5, wherein said central member comprises a structure selected from the group consisting of mesh and web.
18. The apparatus of claim 17, wherein said central member comprises a shape memory alloy mesh.
19. The apparatus of claim 5, further comprising:
a tab connected to said central member and directed radially inward,
said tab being adapted to translate force in an axial proximal direction into force in a radially outward direction.
20. The apparatus of claim 5, further comprising:
a tether connected to a proximal portion of said central member.
21. The apparatus of claim 20, wherein said tether is adapted to be connected to a sensor.
22. The apparatus of claim 21, wherein said sensor is selected from the group consisting of a camera, an electromagnetic sensor, a manometry sensor, a pH probes, and probes for lumen content sampling.
23. The apparatus of claim 20, wherein said tether is adapted to be connected to a treatment delivery device.
24. The apparatus of claim 23, wherein said treatment delivery device is selected from the group consisting of pharmaceutical delivery devices, chemotherapy delivery devices, treatment activation devices, photodynamic therapy devices, radioisotope containment devices, radioisotope delivery devices, thermal delivery devices, radiofrequency delivery devices, radioisotope containers, thermal delivery devices, photochemical delivery devices, radio frequency delivery devices, stimulating electrode devices, pacemakers, and nerve stimulators.
25. The apparatus of claim 5, wherein said apparatus is adapted to be used with a device selected from the group consisting of an endoscope and an echo-endoscope.

26. A method comprising the steps of:

anchoring a tissue to a luminal structure, wherein said tissue is anchored by use of an apparatus of claim 5 that is adapted to penetrate through said luminal structure and at least into said tissue,

wherein said tissue is held in approximately constant position relative to at least a region of said luminal structure.

27. The method of claim 26, wherein said tissue comprises a second luminal structure.

28. The method of claim 26, where said luminal structure comprises a tissue selected from the group consisting of a bladder, uterus, ductal structure, tracheo-bronchial tree, vein, artery, and segment of bowel.

29. The method of claim 27, where said second luminal structure comprises a tissue selected from the group consisting of a bladder, uterus, ductal structure, tracheo-bronchial tree, vein, artery, and segment of bowel.

30. A tissue anchoring apparatus comprising:

a penetrating member with a releasable tissue anchor, said penetrating member surrounded by an outer sheath;

pre-biasing means for pre-biasing the penetrating member forward in an axial direction of the apparatus;

release means for causing said pre-biased penetrating member to be released so that said penetrating member is projected forward in the axial direction of the apparatus; and

an attachment arranged to fix said penetrating member at an inlet port of a passage of an endoscope.

31. A device according to claim 30, wherein said pre-biasing means comprises an outer sleeve adapted to enable adjustment of an exposed portion of said outer sheath.

32. A device according to claim 30, wherein said pre-biasing means comprises a calibrating sleeve adapted to enable precise adjustment of a depth of penetration of a tissue layer.

33. A device according to claim 30, wherein said pre-biasing means comprises a spring that is connectable to and disconnectable from said penetrating member, and wherein when

said spring is disconnected from said penetrating member, said penetrating member is adapted to be manually controlled.

34. A device according to claim 33, wherein said spring is a coil spring.

35. A device according to claim 30, wherein said penetrating member comprises a distal end portion that is treated by sand-blasting.

36. A device according to claim 30, wherein said penetrating member comprises a distal end portion that protrudes past a distal end portion of said outer sheath surrounding said penetrating member when said penetrating member is projected forward in the axial direction of the apparatus.

37. A device according to claim 30, wherein said outer sheath is movable in a passage of said endoscope independently of said penetrating member.

38. A device according to claim 30, wherein said apparatus is adapted for used in an echo-endoscope.

39. A device according to claim 30, wherein said attachment comprises a screw attachment.